

9-1-2005

### BS News

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# BSNews

MECHANICAL & ELECTRICAL BUILDING SERVICES

SEPTEMBER 2005

**BSNews**

Building Services

Product Specification Guide

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# BSNews

MECHANICAL & ELECTRICAL  
BUILDING SERVICES

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READERSHIP DATA

BSNews (formerly Irish Building Services News) is Ireland's only dedicated Building Services magazine providing coverage of heating, ventilating, air conditioning, refrigeration, sanitaryware, plumbing, maintenance, energy and environmental industries. It is the only publication catering exclusively for these industries and its circulation includes members of the following:-

Chartered Institution of Building Services Engineers (CIBSE); The Mechanical Engineering & Building Services Contractors' Association (MEBSCA); The Association of Consulting Engineers of Ireland (ACEI); The Mechanical Engineering Contractors' Association; The Institute of Domestic Heating Engineers (IDHE); The Institute of Plumbing; The Register of Environmental & Gas Installers of Ireland (REGII); The Irish Home Builders Association (IHBA); Builders Merchants/Trade Supply Outlets; Irish Property & Facilities Managers Association.

In addition, BSNews circulates to independent building services contractors and key executives in industry. Government, Semi-State and local authority bodies. Essentially, our circulation is virtually saturation coverage of all those with an interest and/or involvement in the building services industry.

O P I N I O N

## Product Specification Guide Goes Online

The online version of the **BSNews Building Services Product Specification Guide** will be formally launched on 3 October 2005.

With over 6,000 cross-referenced, brand-led entries under 250 primary and sub-category headings, the new online version is particularly dynamic with updates and changes being added on a daily basis.

The printed version is already used extensively by architects, consulting engineers, contractors, installers, etc and it is at their prompting that the online version has been produced. It is intended as a complementary specifying aid and one which can be used in conjunction with the printed version.

Readers can now register with the **PREVIEW** online version of the Guide by accessing **www.bsnewsbuyerguide.com** for a limited **free trial period**.

From 1 December 2005 there will be an annual Membership Fee of €121 (VAT inclusive). This fee allows limitless access for a 13-month period up to 31 December 2006.

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# Gas Connections — Designing Out Problems Before They Arise

**BORD GÁIS**  
NETWORKS

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**B**ord Gáis Networks has just revised and published its Technical Manual containing the most up-to-date information on best practices for designing and installing natural gas in new developments. Also available on CD, this new publication is an invaluable tool for architects, mechanical consultants, mechanical contractors and domestic installers.

It covers everything from information on gas mains and services on development sites through to advice on gas pipework installations for residential properties. The level of technical detail provided in the manual ensures that every possible eventuality is identified and catered for. Moreover, the safety documents, design advice and installation pointers are all incorporated into



Bord Gáis Networks has just revised and published its Technical Manual containing the most up-to-date information on best practices for designing and installing natural gas in new developments.

standard templates which can be accessed online allowing the designer to tailor technical information, drawings and best practices to suit their own projects.

Designers and project managers can also register for project connections by emailing drawings and a connections form to the Bord Gáis Networks at plans@bge.ie where an experienced technical team will design a gas network for the development before returning drawings in hard copy. The connections form and details of how to best organise a connection to the natural gas network are contained within the CD.

The objectives of the CD are to identify and provide solutions for any potential problem areas at the design stage of projects, rather than having to take remedial action, which can be time consuming and costly at a later stage; and to make it as easy as possible for the construction industry as a whole to organise a connection to the natural gas network.

For additional technical guidance and information on the full complement of Bord Gáis Technical Publications, contact David Hughes, Connections Engineer at 1850 427 737 or dhughes@bge.ie.



The Natural Gas Network

Bord Gáis Networks is the entity within Bord Gáis which builds, operates and maintains the natural gas network in Ireland. It connects all customers available to the gas network, irrespective of the gas supply company the customer chooses to engage.

## Registered Gas Installers

As the licensed natural gas transporter, Bord Gáis Networks maintains a list of competent gas installers. An industry panel (the Installer Review Panel) continually assesses the installers' competence. To become registered the installer must meet the safety training and other requirements as set down by the Panel. Bord Gáis Networks recommend that gas installations should only be carried out

by a Registered Gas Installer in compliance with the relevant Irish Installation Standards (I.S. 813 or I.S. 820).

To purchase a copy of the domestic gas installation standard (I.S.813: 2002) or the non-domestic installation standard (I.S. 820: 2000) call NSAI Standard Sales on Tel: 01 - 857 6730.

If you are interested in safety training, either Gas Installers Domestic (GID) or Gas Installer 1 (GI1), or in becoming a Registered Gas Installer, visit the Bord Gáis website at [www.bordgais.ie](http://www.bordgais.ie).





# Your flexible friends

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## Flexi Multi R410A Multi splits: 5.6kW to 9.0kW



The new range of Flexi Multi systems are the ideal, flexible solution for providing quiet and efficient heating or cooling to 2, 3 or 4 areas from a single outdoor unit. The units combine the latest SANYO DC inverter technology and R410A refrigerant for excellent energy efficiency, wide operating ranges and long pipe separations.

- 2, 3 or 4 way multi split systems
- Provides heating or cooling
- 5.6kW, 6.8kW and 9.0kW cooling capacities
- DC inverter technology for precise control
- 1 amp start currents
- 6 indoor model styles
- EEL category A

Simple to apply, install and maintain, the SANYO Flexi Multi range also qualifies for the Enhanced Capital Allowance Scheme.  
SANYO - a flexible solution all round.





## High Efficiencies & Maximum Performance from Mark

The new Mark GS+ and G+ condensing gas-fired unit air heater modules — previewed in *BSNews* approximately six months ago — are now in full production with a number of installations already completed.

With traditional gas-fired heaters not all the heat is used. Part is expelled to the atmosphere as water vapour and exhaust gases via the flue, these emissions add to the green house gases already damaging the environment.

However, the new Mark high-efficiency, fully-modulating, pre-mix and condensing units utilise these losses by condensing the water vapour to become water once again. The retained energy is used to give the unit an efficiency of 105% on low fire and 94.7% on max fire,

calculated on the basis of lower calorific value. To further enhance the performance and efficiency of the units Mark has devised dedicated control technology which uses simple bus technology as the communication method between the high efficiency air heater and the room thermostat. This simple bus technology is called "Open Therm".

Open Therm has developed into a standard for heating technology. The Mark G+ and the Mark GS+ have been provided with a microprocessor as standard which has been set up for an "Open Therm" connection.

The heat regulator and the air heater communicate bi-directionally with an Open Therm two-cable bus. On the one hand, the Open Therm interface is responsible for

communication with the room thermostat in the air heater and, on the other hand, it is responsible for communication with the microprocessor in the air heater. The interface supplies all data required to the bus for heat regulation.

The room thermostat is fed through the bus with a 24-volt supply voltage. The room regulator acts as the master that controls the data communication in the bus system. The interface in the air heater is the slave that will respond. The control of an Open Therm regulation is just as easy as that of an on/off thermostat.

However, the bi-directional bus communication offers significantly more functionality in relation to comfort regulation, yet the air heater operation does not become more complicated.

The room thermostat



The new Mark GS+ condensing gas-fired unit air heater modules

operates independently when a conventional on/off control is being used. The thermostat measures the room temperature using its integrated sensor and compares the value obtained with the set temperature.

Communication is only one-way with this type of on/off control: that is, from the thermostat to the air heater. Data will not be sent back. The communication is limited to the on or off switching contacts.

Contact: Mike O'Donoghue, Mark Eire Bv.

Tel: 026 - 45334;

email: sales@markeire.com

## Temple Street Fundraiser Success



Ronnie Drew pictured with Catherine and Bill Treacy and their fellow-team members at the Temple St Hospital fundraiser in Royal Tara Golf Club recently

Keen to demonstrate just how versatile they can be, Catherine Treacy and her colleagues at Versatile Heating, Versatile Agencies and Runtal Zehnder entered three teams in the inaugural Ronnie Drew

Golf Classic at Royal Tara recently.

To say that they should stick to the day job is an understatement ... they even ditched the idea of their own inter-team competition such as the

poor quality of their performances on the play. Still, the point of the event was to raise funds for Temple St Hospital and that was an unqualified success with €20,000 being raised on the day.

Not surprisingly, the post-golf festivities were also fantastic with Ronnie Drew, Paul Brady and Elanor Shanley providing the entertainment.

PS: Catherine is looking for some real golfers to play in the event next year. It is a fun event but one with a very serious and worthy objective. Why not get a team together for next year?

Contact: Catherine Treacy, Versatile.  
Tel: 046 - 902 9444.

## Johnson Controls Acquire York

As we went to press Johnson Controls announced that it is to acquire York International Corporation in an all-cash transaction valued at \$3.2 billion.

Under the deal York, with estimated sales of nearly \$5 billion, will become part of the \$6 billion Controls Group of Johnson Controls.

The combination of York, a leader in the manufacturing and service of heating and cooling equipment, with Johnson Controls, an industry leader in the technologies which control that equipment, is seen as a natural and strategic growth opportunity for both.





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Multi-Service Beam



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For further information please contact:

Unit 3 Block F, Maynooth Business Campus, Maynooth, Co Kildare  
Tel: 01 - 610 6170 Fax: 01 - 610 6171 email: info@entropic.ie web: www.entropic.ie



## MHI Single-Phase Inverter Multi



Mitsubishi Heavy Industries' FDCA140 single-phase, compact, multi system range is now available from 3D Air Sales (Ireland)

The new FDCA140 compact multi system from Mitsubishi Heavy Industries combines the advanced technology of its DC inverter compressor design and heat exchanger construction to provide significantly increased the cooling and heating performance.

The compressor is fully inverter controlled, allowing the compressor speed and output to match the variable combined demand for cooling or heating from the connected indoor units, all

of which operate in same mode — heating or cooling.

There are models and sizes to suit most applications and locations, all units having electronic expansion valves for optimum variable refrigerant flow at part-load conditions.

Model FDCA140 units are the ideal solution where there is limited single-phase power supply, typical applications being banks, offices, retail outlets, meeting rooms, restaurants, hotels, doctors surgeries and hospitals, in addition to residential applications. Also

available are 3-phase outdoor units.

The standard controls specification includes a 7-day programmable timer while the 5-amp start current is a big advantage where power supply is limited.

The CoP of the new units has been dramatically increased, up to 3.73, depending on the combination of connected indoor units. This means the system can deliver 3.7kW of heating while consuming only 1kW of electrical power.

Contact: Michael Clancy or Daren Lowndes, 3D Air Sales (Ireland). Tel: 01 - 462 7570; email: micclan1@eircom.net

## Grundfos Mile High Club!

Sorry, no need to get excited, it's not *that* mile high club! Still, it's just about the next best thing. Grundfos has commenced a series of site visits whereby guests are flown out from Dublin in the Grundfos Corporate Jet to two of its factories in Denmark. They fly in to Karup airport on day one and visit the Grundfos Center and Poul Due Jensen Academy, before going on to the electronics factory in Langaa and flying home from Aarhus

the next day. In between there is sight-seeing, a shooting competition, a sailing trip, and some semi-formal lunches and dinners.

Those on trip one included (see right) Vincent O'Shea, Bowen Water Technology; Owen Leonard, Broadstone Engineering; Liam Trundle, Euro Fluid; Stephen Grant, Grant Engineering; Darragh McCarthy, DAHRA; Alan Vale, Earthech Ireland; and Tony Mahon, Treatment Systems. If you missed this one, hustle Gordon for the next.



## What Implications for Quinn Investment?

Now that the rumoured Quinn Group investment in a massive new radiator manufacturing plant in Newport in Wales has been confirmed, industry observers are asking what implications it has for its Irish-based production facility.

A reported €200

million is being invested in the new venture with the site being expanded to almost 93,000 sq m (one million sq ft) to cater for an annual production run of four million radiators. Quinn bought the former LG Philips building from the Welsh Assembly after year-long negotiations and is said to have received a

€6 million grant because of the employment it will bring to the region.

Apart from Ireland, Quinn Radiators has production facilities in Belgium and the UK, and the new plant in Wales is reportedly necessary to satisfy increased demand across Europe where low interest rates are fuelling the construction of new homes and the renovation of existing properties.





# economical ecological ecolution: high performance solution



ECOLUTION is the new generation of split, multi-split and VRF inverter systems from Mitsubishi Heavy Industries Ltd.

Packed with new features, our intelligent design ensures high performance combined with ultra energy efficiency. All models are now quieter, smaller and lighter, allowing a simple and neat installation for applications from a single room to an entire building.

ECOLUTION - high performance solution.





## EPACE Shows Way For Mech. Sector

Pensions and Conditions Electrical Ltd (EPACE) is an organisation formed by employer and trade union organisations in Ireland to monitor and ensure compliance with the Registered Employment Agreement (REA) for the Electrical Industry Sector. The REA gives statutory effect to the rates of pay and terms and conditions of employment set out in the agreement and which are legally binding on all electrical contractors and their employees, whether or not they are parties to

the agreement.

EPACE recently relocated to new premises and held an official opening to celebrate the event. Guests included representatives from employer bodies and trade union organisations including the AECl, the ECA and the TEEU. The guest speaker, Fergus Whelan from the National Pensions Board, discussed the current level of non-compliance within the electrical contracting industry and the increasing need for



Back row: Pat Burke, Grant Thornton with George Kennedy, AECl; Dermot McClannon, President, AECl; Jean Winters, ECA; Fergus Whelan, National Pensions Board; Anna Farrell, TEEU; Frank Miller, EPACE Inspector.

Front row: Rebecca Vega, EPACE Administrator; Robert McClean, ECA; Michael Kelly, AECl; David Naughton, TEEU; Shaun McDermott, Vice President, AECl; and Moira Duffy, TEEU.

monitoring within that sector.

Contact: Rebecca Vega,

EPACE.

Tel: 01 - 429 7984;

email: info@epace.ie

## Compact & Quiet Water-Cooled Chillers



York International's YCSE range of high-reliability screw compressor, water-cooled liquid chillers have a compact design, operate quietly and offer cooling capacities from 125kW to 316kW.

York International has introduced its YCSE range of high-reliability screw compressor, water-cooled liquid chillers that have a compact design, operate quietly and offer cooling capacities from 125kW to 316kW. They are suitable for chilled water or glycol cooling down to minus 10°C.

The five models in York's YCSE range have been designed with the smallest footprint currently on the market,

compared to similar chillers, making them easy to install and particularly suitable as replacement machines in refurbishment projects. The built-in oil separator acts as a sound muffler, resulting in low noise operation. The chillers are therefore also ideal for installation in public buildings such as hotels, hospitals, shops, offices and ice rinks.

The screw compressor has twin rotors and solenoid valve capacity

control with overcurrent and thermostat protection, ensuring a high level of reliable performance.

York's YCSE units use a low volume of R407C and are available with one or two independent refrigerant circuits and a single evaporator and condenser. They utilise advanced electronic control to position the variable capacity control slide valve within each compressor. This ensures precise load control, accurate chilled water temperature control and improved part load performance.

These chillers have been designed to be located inside a plant room and require a cooling tower or dry cooler for heat rejection.

Contact: Andrew McEvitt, York.

Tel: 01 - 466 0177;

email:

yorkdublin@ie.york.com

## Toshiba Compact Inverter System

GT Phelan has just introduced Toshiba's new compact digital inverter split system condensing units. They are said to be lighter, and as much as 40% smaller, than previous Toshiba models.

New fan designs save power and reduce noise while the new three-row multiple tube heat exchanger increases heat exchange capacity over traditional two or single-row designs.

The system utilises a high-efficiency DC twin rotary compressor and offers capacity ranges from 5kW to 12.5kW in cooling and 5.6kW to 14kW in heating. The system is also capable of functioning in ambients down to -15°C.

All systems operate on R410A refrigerant. Contact: Derek Phelan, GT Phelan.

Tel: 01 - 286 4377;

email:

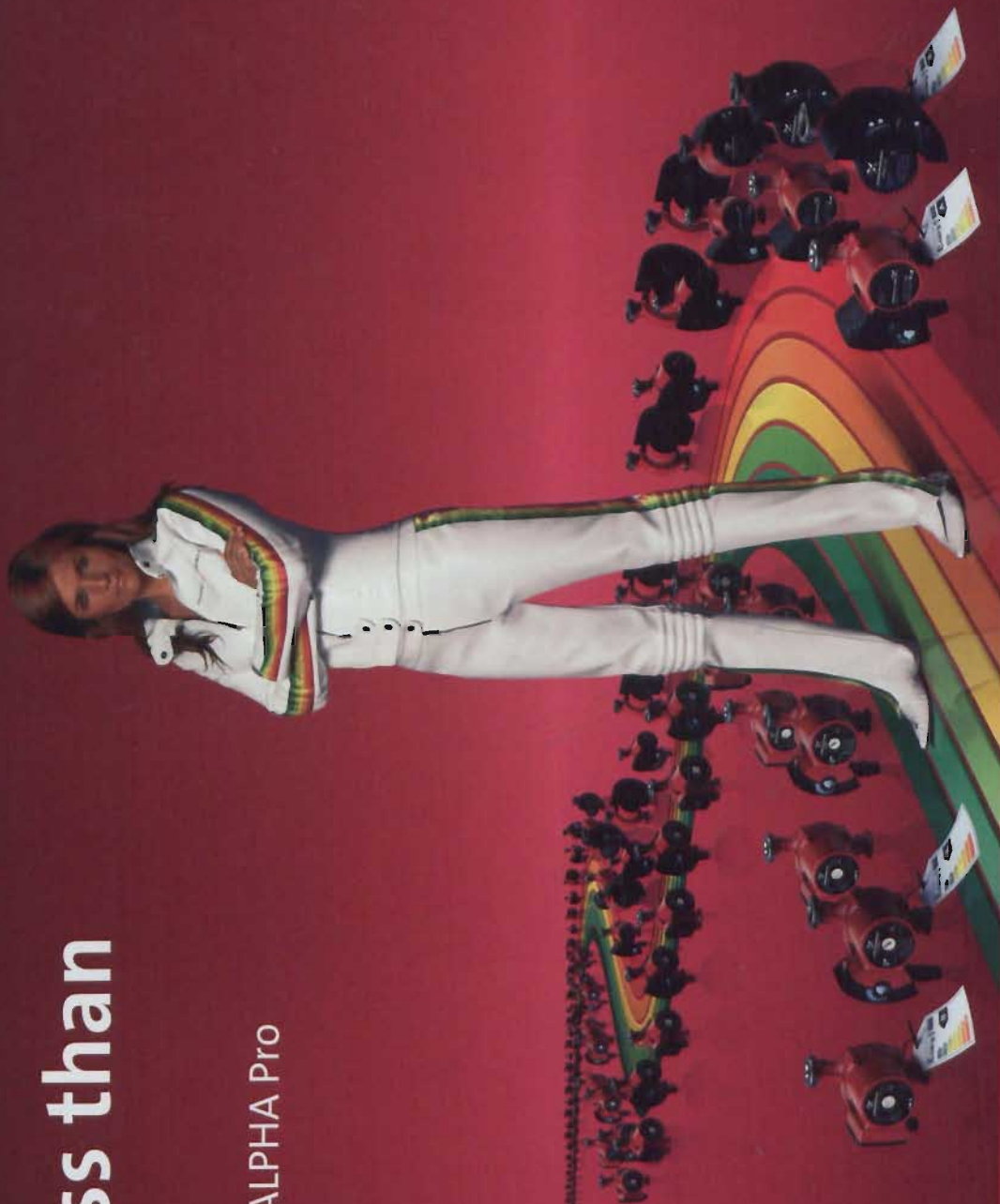
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**GRUNDFOS** >



**Cabinet heater****CAPACITY:** 30 KW – 1,000 KW**PRODUCT APPLICATION**

Factories • Engineering Plants • Abattoirs • Cardboard Factories  
 Paper Factories • Workshops • Garages • Warehouses • Shops  
 Aeroplane Hangars • Showrooms • Hotels • Cash & Carry  
 Gymnasiums • Dressings Rooms • Exhibition Halls

**GS / GC / ROOF TOP****Unit air heater****CAPACITY:** 20 KW – 95 KW**PRODUCT APPLICATION**

Factories • Engineering Plants • Abattoirs • Cardboard Factories  
 Paper Factories • Workshops • Garages • Warehouses • Shops  
 Aeroplane Hangars • Showrooms • Hotels • Cash & Carry  
 Gymnasiums • Dressings Rooms • Exhibition Halls • Pub's, Bar's & Restaurants

**CALFLO****Gas-fired make up air unit****CAPACITY:** 65 KW – 1,200 KW (+)**PRODUCT APPLICATION**

Engineering Plants • Spray Cabinets  
 Paper Factories • Garages • Exhibition Halls  
 Process Industry • Factories • Abattoirs •  
 Cardboard Factories

**RADIANT PLAQUE****CAPACITY:** 2.5 KW – 27 KW**PRODUCT APPLICATION**

• Aeroplane Hangars • Shops • Cash & Carry  
 • Cargo Platform • Grandstand • Workshops • Warehouses  
 Gymnasiums • Exhibition Halls

**INFRA AQUA****Water radiant panels****CAPACITY:** Project Related**PRODUCT APPLICATION**

Offices • Factories • Abattoirs • Workshops •  
 Garages • Warehouses • Shops •  
 • Showrooms/Hotel • Cash & Carry  
 Gymnasiums • Dressings Rooms • Exhibition Halls  
 • Churches • Aeroplane Hangars

**INFRA/INFRA MONO****Gas-fired black****CAPACITY:****PRODUCT**

Factories • Engineering Plants  
 Warehouses • Aeroplane Hangars  
 Gymnasiums • Exhibition Halls

**TANNER / DOOR****Warm water****CAPACITY:****PRODUCT**

Factories • Engineering Plants •  
 Warehouses • Aeroplane Hangars •  
 Cash & Carry • Gymnasiums •

**KLIMAT****Air handling units****ECOFAN****Destratification****PRODUCT APPLICATION**

Factories • Engineering Plants • Abattoirs  
 Aeroplane Hangars • Showrooms • Hotels •  
 Gymnasiums • Dressing Rooms •



## INFRA LINE

### tube radiant heating



13 KW – 100 KW

#### APPLICATION

- Abattoirs • Workshops • Garages
- Shops • Cash & Carry
- Cargo Platform • Grandstand

## CURTAINS

### unit air heaters



8 KW – 115 KW

#### APPLICATION

- Abattoirs • Workshops • Garages
- Showrooms • Shops
- Dressing Rooms • Exhibition Halls

#### PRODUCT APPLICATION:

- Offices • Factories • Spray Cabinets
- Abattoirs • Workshops • Garages
- Warehouses • Aeroplane Hangars •
- Showrooms • Hotels • Shops •
- Cash & Carry
- Gymnasiums • Dressing Rooms •
- Churches • Pub's, Bar's & Restaurants

**CAPACITY:**  
4,000 - 8,000 -  
14,000 m<sup>3</sup>/h



- Workshops • Garages
- Shops • Cash & Carry
- Exhibition Halls • Churches

## DRYFLO

et al.: BS News

### Industrial burner installation



**CAPACITY:** 1 KW – 13,000 KW (+)

#### PRODUCT APPLICATION

Process Industry

## VENTILATION MDV

### Roof fan

**CAPACITY:** 1,840 to 10,200 m<sup>3</sup>/h

#### PRODUCT APPLICATION

- Offices • Process Industry • Construction Halls •
- Factories • Engineering Plants
- Spray Cabinets • Abattoirs • Workshops • Garages •
- Warehouses • Cash & Carry
- Aeroplane Hangars • Showrooms • Hotels • Shops •
- Gymnasiums • Dressing Rooms



## WALL MOUNTED HEATING

### Gas fired wall and ceiling heaters

**CAPACITY:** 2.5 KW – 10 KW



#### PRODUCT APPLICATION

- Offices • Domestic Rooms • Creche • Meeting Rooms
- Car Show Rooms • Hotel Rooms • Banks • Shops

## FAN COIL

### Wall and ceiling L.P.H.W. fan coil

**CAPACITY:** \* Heating 3.6 KW to 16 KW  
\* Cooling 1.5 KW to 6.9 KW



#### PRODUCT APPLICATION

- Offices • Domestic Rooms • Creche • Meeting Rooms
- Car Show Rooms • Hotel Rooms • Banks • Shops

## BENDER

### Hydraulic pipe bending machine



**PIPE DIAMETERS:** 3/8" to 4" (thick-wall)  
10mm to 42mm (thin-wall)

**CONTROL:** Hand or Electric

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Published by ARROW@TU Dublin, 2005

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## LG Multi M Multi-Split



The new Multi M multi-split system from LG is now available from Core Air Conditioning. This energy-efficient system is suitable for comfort cooling-only or heat and cooling option in conjunction with LG's Art Cool or wall-mounted indoor units.

The outdoor units use MPS variable control which uses single-phase electricity with two compressors operating at 40% and 60%, rather than conventional ones working at 100%. This allows for

energy savings of up to 35%.

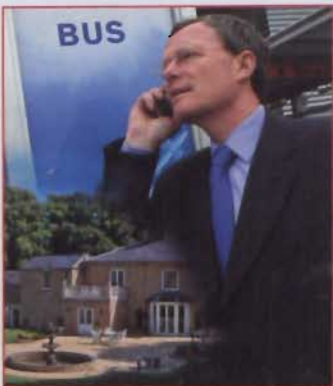
A maximum of four indoor units can be run off one outdoor unit and these can be any combination of wall-mounted or Art Cool Mirror or standard.

All indoor units come with a hand-held infrared remote controller for temperature settings, mode selection, air circulation and fan operation.

Contact: Austin McDermott, Core Air Conditioning.

Tel: 01 - 409 8912; email: [info@coreac.com](mailto:info@coreac.com)

## Home Control From Anywhere in the World



Hometronic is a wireless automation system which integrates home systems such as lighting, appliances and heating. As it uses secure and reliable RF (radio frequency) links throughout the home, it is quick and easy to install.

The HCI300 voice and web interface enables users to use a phone to switch between various lifestyle profiles, which they can preset. These tell

Hometronic what to do, how and when. For example, each profile can be programmed with various lighting patterns, inside and outside the home, for selection at the touch of a button – within the home or remotely by phone.

A profile can regulate the temperature to unique values in each room and adjust these values at times chosen by the user. It can switch appliances, lights and services at pre-programmed times or in response to certain events; so blinds and curtains are closed when it gets dark, or a garden sprinkler is started when it is too dry.

Contact: Honeywell Comfort Controls.

Tel: 0044 1344 656000;

email:

[literature@honeywell.com](mailto:literature@honeywell.com)

## Hochtief FM Appointment

Hochtief Facility Management has appointed Fintan Lyons as Technical Services Manager for Ireland. Fintan has over 20 years experience in facility management services, project management and building services

maintenance. He will be responsible for managing the services supplied by the company, to deliver the highest levels of efficiency and customer service.

Contact: David Nally, Hochtief Facility Management.

Tel: 01 - 215 7000.

## Latest from Trane

Latest product introductions from Trane Ireland include the new CLCE air handling units and HFR/HFH slim-line fan coils.

Specially designed for office and hotel applications, the new HFR fan coils have factory-mounted options for "plug and play" installation with all components selected to give dependable reliability without influencing performance. Eurovent certification guarantees accurate performance data and common comparison

criteria.

The CLCE air handling units provide high indoor air quality, high flexibility, and factory-engineered controls, making it energy efficient as well as easy to install and maintain.

Applications include office buildings, shopping centres, retail stores, hotels, cinemas and leisure centres as well as for hospitals.

Contact: Andy Green, Trane Ireland.

Tel: 01 - 460 6030;

email:

[andy\\_green@trane.com](mailto:andy_green@trane.com)

## Pump Technology Made Easy

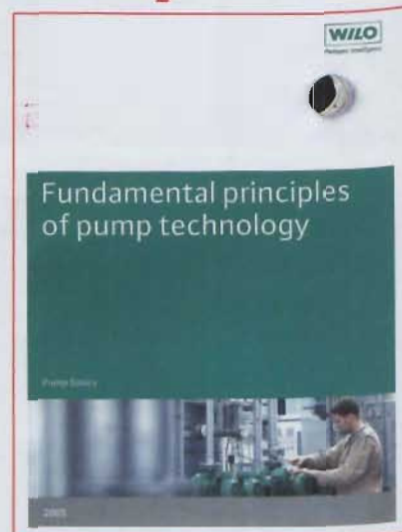
*Fundamental Principles of Pump Technology* is the title of a new publication from Wilo which covers the history of pump technology, pump design, pumping systems, adjusting the pump to the heat demand, etc.

Copies are available from Wilo Engineering.

Contact: Wilo Engineering.

Tel: 01 - 426 0000;

email: [sales@wilo.ie](mailto:sales@wilo.ie)



## SME Sales Move

SME Sales has moved to new premises incorporating offices and warehousing at Unit 9C, Northwest Business Park, Collooney, Co Sligo.

Tel: 071 911 5880; Fax: 071 911 5885.



## Professional Wastewater Pumps From Grundfos



The new SE1 and SEV 1.1-11kW ranges of pumps are tough and reliable heavy-duty submersible sewage pumps, suitable for handling wastewater, process water and unscreened raw sewage.

Built to provide years of trouble-free operation

in the most demanding applications, these pumps can be permanently installed by means of an auto-coupling guide-rail system or with a fixed pipe connection, submerged or dry without separate motor-cooling arrangements. The

pumps are also suitable for freestanding installation, or as portable utility pumps.

The SE1 family are fitted with channel-impellers that provide high efficiency and excellent non-clogging capabilities. Depending

on the model selected the impellers allow for free passage of solids of 50mm, 80mm and 100mm.

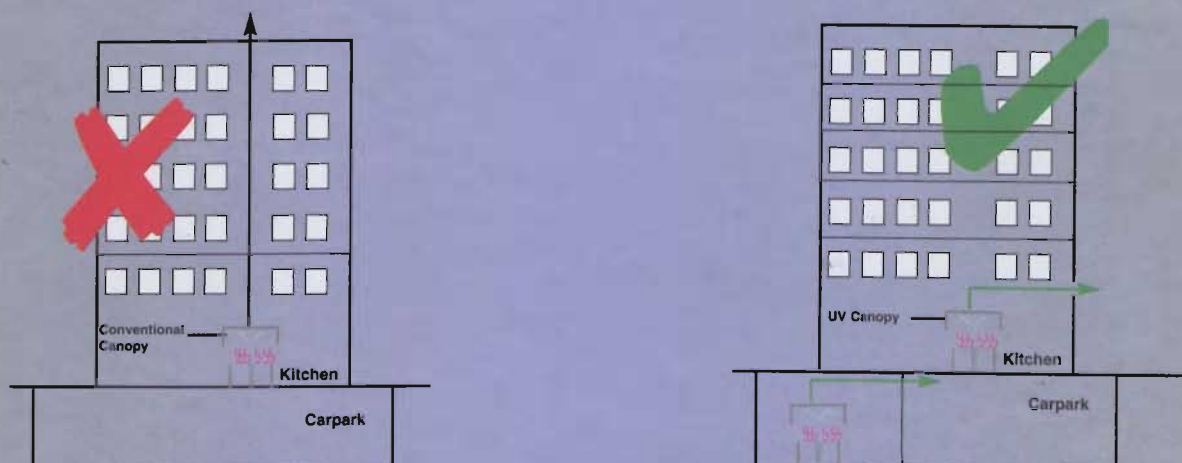
The Super Vortex impeller of the SEV family is unique, the special blade vanes ensuring high pumping efficiency and excellent air evacuation while preventing clogging or jamming. Both pumps are extremely reliable and both are very easy to service.

Brochures on the SE1/SEV ranges are available on request.

Contact: Grundfos Literature Hotline.  
Tel: 01 - 408 9805;  
email: ghoran@grundfos.com

## Halton Capture Ray Kitchen Canopies from Entropic

Combining multi-cyclone filters with ultra violet technology



*Ever thought of exhausting at low level or into a basement carpark? Now you can*

### The benefits are

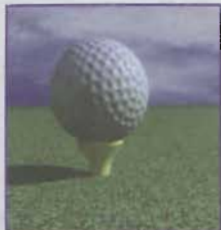
Reduced airflows and energy consumption with Capture Jet technology — Elimination of grease and odours —  
Reduced risk of fire — Commercial kitchens in new locations —  
Energy recovery from kitchen exhaust is now possible — Guaranteed comfort conditions



For further information please contact:

Unit 3 Block F, Maynooth Business Campus, Maynooth, Co Kildare  
Tel: 01 - 610 6170 Fax: 01 - 610 6171 email: info@entropic.ie web: www.entropic.ie





## Newlands Proves Tough Challenge

Despite the beautiful weather and excellent condition of the course, Newlands still proved a tough challenge for the 70 plus members and guests who played in the recent BTU Captain's outing. Ray Byrne eventually emerged winner with 36pts, closely followed by Eamon McGrattan with 35pts, who just stole it on the last 6 from third-placed Eamon Vickers, also on 35pts.

Sponsors on the day were Dublin Providers and their representative Terry Maher presented the prizes with BTU Captain John White. Full details are as follows:—

### Overall Winner

### Captain's Prize

Winner — Ray Byrne (36 pts);

Second — Eamon McGrattan (35 pts);

Third — Eamon Vickers (35 pts).

Class 1 (0 - 12)

Winner — Bernard Sweeney (34 pts);

Second — Des

Prendergast (32 pts);

Third — Eamon Walsh (30 pts);

### Class 2 (13 - 17)

Winner — David Lynch (33 pts);

Second — George Carlton (33 pts);

Third — Tony Gillen (32 pts);

### Class 3 (18 +)

Winner — Terry Maher (34 pts);

Second — Frank Field (33 pts);

Third — Damien Mooney (32 pts).

### Front 9

Winner — Michael Kearney (19 pts).

### Back 9

Winner — John White (19 pts).

### Past Captain's

Winner — Eamon McGrattan (35 pts).

### Visitor

Winner (Mens) — Mark Finnegan (39 pts);

Winner (Ladies) — Marian Maher (31 pts).



Terry Maher with Des Prendergast, 2nd Class 1 and BTU Captain John White



BTU President Michael Murphy with overall winner Ray Byrne



John Duignan with Tony Delaney



Terry Maher with Bob Daly and BTU Captain John White

## Next BTU Outing

The next BTU outing is at Royal Dublin on 15 September next. Sponsor is Danfoss Ireland.



# using nature to devise ...

## design-led

## technology-driven

## heating concept solutions



runtal



jaga



vogel

zehnder radiant  
ceiling panels

Versatile Agencies has taken the traditional concept of heating and given it form. This is achieved by applying its own extensive knowledge and experience to the product portfolios of cutting-edge, innovative, brand leaders like Jaga, Runtal Zehnder, Sabiana and Vogel.

Heating solutions are custom-designed to facilitate each application. Where visible, the heat emitters contribute to the aesthetics of the setting; however, they can also be unobtrusive to the point of being invisible.



Beechmount Industrial  
Estate, Navan, Co Meath

Tel: 046 - 902 9444  
Web: [www.versatile.ie](http://www.versatile.ie)





## Wilo Dublin Branch Underpins National Support Systems

Established as a satellite location approximately 18 months, the Wilo operation in Dublin is now a fully-fledged branch operation serving all of Leinster, the northern counties, the midlands, the west and northwest of the country.

Fully staffed with both sales and technical support personnel, the office is strategically located in Riverview Business Park, immediately adjacent to the M50 and in the heart of what is fast-becoming the main concentration of building services-related companies in Ireland.

It has a direct broadband link to Wilo Engineering in Limerick and includes state-of-the-art training facilities where technical evenings, training seminars and CPD presentations are regularly carried out.

"The decision to establish a central office in Dublin was in direct response to the massive growth we are experiencing", says Tony Cusack, Managing Director, Wilo Engineering. "We now provide a more enhanced service level to existing customers while the new structure also means more immediate response to new enquiries.

"Derek Elton, Robbie Linnane and myself look after external sales while Damien Gernon and Tom Byrne handle internal sales and service coordination with general support from Kathleen O'Keeffe.

"Thomas Brennan is our Senior Service Engineer and he is



External Sales — Robbie Linnane, Derek Elton and Tony Cusack



Internal Sales & Service Coordination — Tom Byrne, Kathleen O'Keeffe and Damien Gernon

responsible for all commissioning, preventative maintenance programmes, and emergency call-outs. He oversees and coordinates the activities of our panel of authorised service engineers who are each responsible for specific sectors within the region.

"Completing the Dublin-based senior management team is Business Development Manager Jim Murphy. Jim's expertise is in sewage and wastewater products, a fast-growing industry sector. He has 25 years experience in the area, both in Ireland and overseas, and is now bringing that knowledge

and expertise to bear throughout the entire country, including Northern Ireland.

"Sewage and wastewater is a specialist market segment with particular needs and we have developed a tailored portfolio under the Wilo EMU brand to serve it. Manufactured under strictly-controlled quality procedures at a dedicated plant in Hof, Bavaria, this is a growing industry sector and one which has particular significance given the increased awareness of, and emphasis on, environmental protection.

"Looking to the future, we at Wilo Engineering are optimistic but cautious. Traditional market segments are holding up well with new areas, such as sewage and wastewater, expanding. However, we have to be continuously innovative and inventive, not just in developing new product solutions but in how we bring them to the marketplace and provide customer support. With the new Dublin Branch now fully operational we are confident on all fronts."



Tom Brennan, Dublin-based Senior Service Engineer



Jim Murphy, Business Development Manager, with special responsibility for sewage and wastewater products



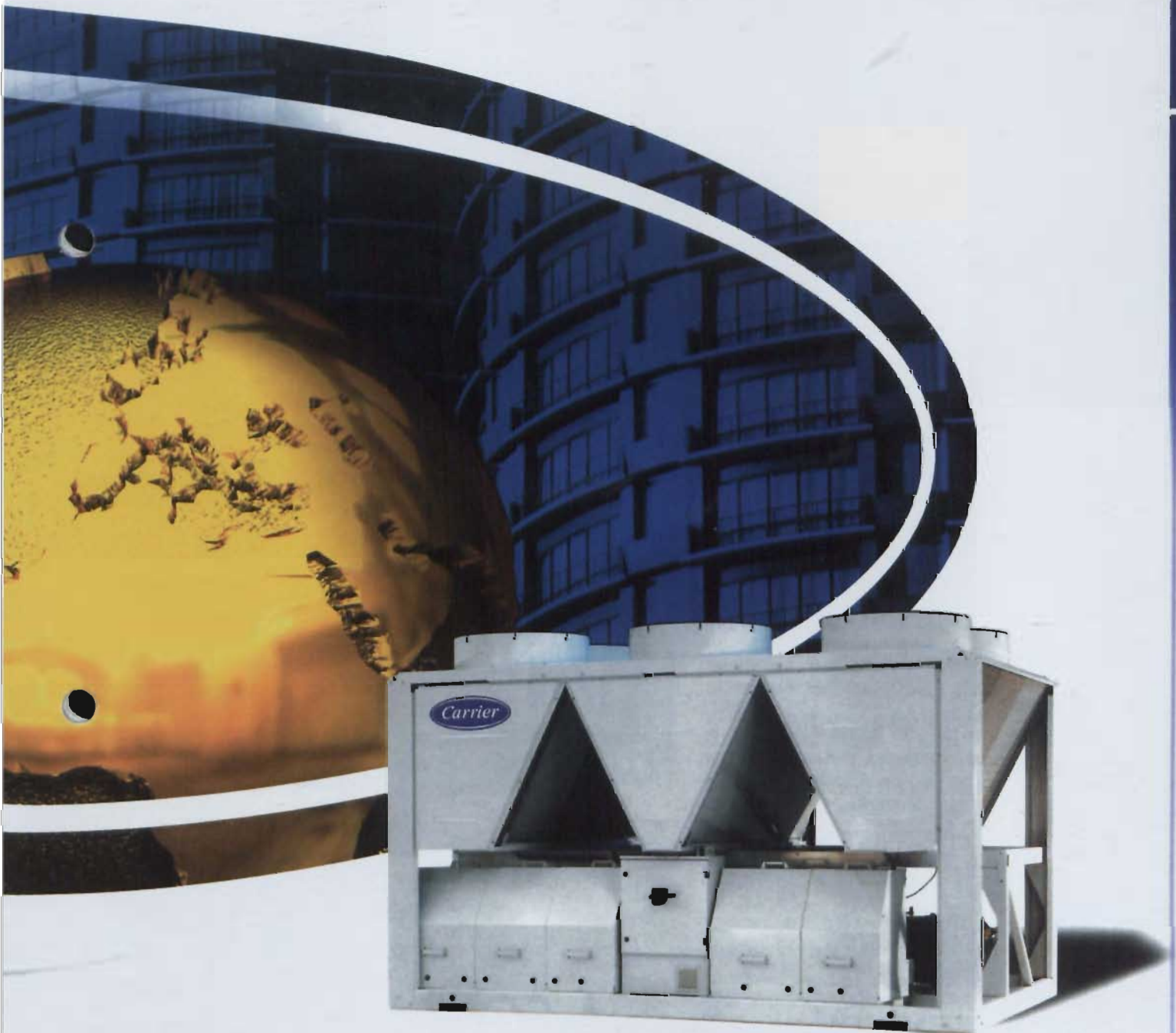


et al.: BS News

# AQUASNAP™

LIQUID CHILLER  
HEAT PUMP  
190-760 kW

## A Multi-Talented Performer



Published by ARROW@TU Dublin, 2005  
AIR CONDITIONING LTD

Unit A6, Centre Point Business Park, Oak Road,  
Clondalkin, Dublin 22

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email: [info@coreac.com](mailto:info@coreac.com)

Fax: 01 - 409 8916  
web: [www.coreac.com](http://www.coreac.com)

30RB/30RO - R410A





Continuing the cycle of innovative industry firsts is the new ACS packaged chiller with shell and tube evaporator and low noise facility as standard features.

## DUNHAM-BUSH PORTFOLIO

- Air cooled flooded chillers with screw compressors;
- Air cooled packaged chillers with scroll compressors;
- DB AIRE precision environmental control units;
- Water cooled chillers with rotary screw compressors;
- Air cooled rotary screw packaged chillers;
- Ice-Cel energy storage device

## DUNHAM-BUSH INTERNATIONAL JOINS FORCES WITH CTS

Dunham-Bush International and Cross Technical Solutions (CTS) have joined forces to bring the extensive range of Dunham-Bush refrigeration and air conditioning equipment to the Irish marketplace. This new partnership represents a unique marriage between a young, dynamic company and one of the oldest providers of cutting-edge solutions to the building services sector.

For most of this century Dunham-Bush has been providing innovative solutions for the air conditioning and refrigeration needs of customers throughout the world, including Ireland. Today's global company has a heritage dating back to 1894 and since then it has enjoyed a cycle of engineering breakthroughs which still continues right up to the present day.

This legacy of innovation is epitomised by its current portfolio of advanced compressors, ultra-quiet packaged chillers, wall mounted and ceiling exposed split air conditioners, new-age air handling equipment, ice thermal storage, and architecturally-oriented cooling equipment.

For its part CTS is a young, vibrant company providing technically-driven refrigeration solutions for critical, temperature-sensitive, applications. Established by experienced and highly-qualified refrigeration engineers, the combined experience of CTS management personnel is reflected in the number of high-profile projects completed since its inception.

Dunham-Bush International and CTS make for a unique trading partnership. Combining tradition, experience, technical expertise and innovation, they work together to devise dynamic, pro-active, custom-engineered, refrigeration solutions to suit **Specialist Industries**.



## ABOUT CTS

Cross Technical Solutions specialises in refrigeration design and installation, providing "*Refrigeration Engineering by Refrigeration Engineers*" which are custom-designed to meet the critical needs of each application.

As a "green approach" company, its policy is to provide turnkey packages which comply not just with current legislation and requirements, but which also anticipate future regulations and needs.

Sustainability is also a critical factor, Energy Usage, Environmental Impact and Life-Cycle costs having a significant bearing on the designed solution, along with health and safety compliance.

CTS provides comprehensive design and installation, including project management, to ensure that the system is installed to specification, on time, and within budget.

It offers a complete turnkey package, including:—

- **Site Evaluation;**
- **System Recommendation;**
- **Full Design and Specification;**
- **Project Management of the Installation;**
- **Coordination of Commissioning and Handover;**
- **Monitoring of Running Costs;**
- **Full Service and Maintenance**

CTS is very much a refrigeration company with engineering management and personnel who are dedicated to providing innovative technical solutions.

It views training for its own staff, and that of its customers, as an integral part of the complete project process. Consequently, it runs regular updates and technical seminars for both, including its network of accredited installer partners and approved vendor suppliers.

**If you have a specialist refrigeration requirement CTS can provide the engineered solution.**



David Killalea, General Manager with Kevin Myler, Technical Sales



Technical Director, John Golding with Project Manager, Fergal O'Loughlin

## BRANDS REPRESENTED

Dunham-Bush International  
GEA Grasso Refrigeration  
KUBA Heat Exchangers  
Revalco Refrigeration Valves  
Dometic Refrigeration Cabinets

**Unit 22, Kilcarbery Business Park, Nangor Road, Clondalkin, Dublin 22**

**Tel: 01 - 405 6777 Fax: 01 - 413 6932**



# Manotherm Spells Controls Expertise

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The name Manotherm is synonymous with instruments and controls in Ireland. The company was established in 1958 with the objective of providing instrumentation and control solutions for both process and research industries using the most advanced products available.

Right from the outset the objective has been to listen to customers requirements, and then to provide them with a solution by globally sourcing products and equipment to meet their needs.

The Manotherm portfolio is made up of international, market-leading brands from across the globe such as West Instrument, Johnson Controls, Rüeger, Seetru and Bindicator. Over the years the product offering steadily increased with the inclusion of Dwyer Instruments, Gems Sensors, Land Infrared, Jordan Valve, PR Electronics and a host of others.

The expansive scope of the range provides competitively-priced precision instruments for measuring, transmitting and controlling pressure, temperature, level and flow. The product types include flow, level, temperature, pressure, humidity, valves, and infrared measuring devices.

Market segments catered for include pharmaceutical, food, water, power generation, chemical, semiconductor, mining, HVAC, oil and gas.

A recent addition to

the range is the Mercoid MPC pump controller which provides versatile level control in a standard 1/4 DIN package.

Designed for use with almost any style level transmitter, the unit displays the present level and main set point value. Incorporated in the MPC is programmable level differential for on/off control of one or two pumps, valves, or other devices through two SPDT relays. Also featured are two additional programmable alarm contacts with front alarm light indication.

The MPC is flexible and incorporates a user-friendly programming menu. The front face meets NEMA 4X for outdoor panel mounting. So many features are combined into the MPC that it eliminates many components in a pump control system.

Another recent addition to the range is the "quick & easy" push-button temperature transmitter from Love Controls, a division of Dwyer Instruments. Quickly ranged and calibrated using a single on-board switch, Love Controls' Model 659TH-1 push-button temperature transmitter accepts thermistor (2252Ω) input and converts the sensor temperature to a linearized 4-20 mA output. Units are accurate to  $\pm 0.25^\circ\text{F}$  ( $\pm 0.1^\circ\text{C}$ ) within a range of 32 to 212°F (0 to 100°C).

Model 659TH-1 transmitters are easily programmable as no additional software is required. Units feature an LED that provides visual indication of the sensor

fault and programming mode. Reverse polarity protection is a built-in feature. The transmitter is designed to mount inside a DIN standard probe head enclosure.

Love Controls produces a wide variety of controls which are designed and manufactured to high quality and reliability standards and backed by solid warranties and years of practical experience.

But Manotherm is not just about products. In addition to providing quality precision instruments, Manotherm is committed to an exceptional level of customer service, including knowledgeable, courteous technical support that generates and maintains long-term trading relationships.

This includes a calibration service for pressure gauges, pressure transmitters, dial thermometers and temperature transmitters for the following parameters:

- Vacuum: from atmospheric to - 800mbarg;
- Low Pressure: from 1 Pa to 2.0 bar (medium air);
- High Pressure: from 0-550 bar (medium oil);
- Temperature range 1: 20 to +100°C for stems with max OD 6mm (stem lengths from 100 to 150 mm);
- Temperature range 2: + 50 to + 150°C for stems with max OD 12.7mm (stem lengths from 150 to 200 mm).

Manotherm also conducts steam trap surveys. Each trap at the particular site location is tested and any that have



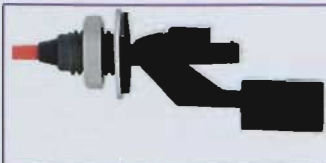
Push button temperature transmitter



The Model NVII



The new Dwyer Instruments' Series 641B air velocity Transmitter available from Manotherm



Gems Sensors' LS-7 Series, Type 12, polastic side-mount level switch available from Manotherm

failed will be tagged with an identification number. When the survey is complete, a detailed report will be issued identifying these failures.

This service is provided throughout all of Ireland from Manotherm's headquarters in Dublin and its Northern Ireland-based Branch Office in Banbridge, Co Down.

Contact: Bob Gilbert, Noel Walsh or Robert Gilbert, Manotherm. Tel: 01 - 452 2355; email: info@manotherm.ie



# Planning an environmental upgrade for your building?

et al.: BS News



## Honeywell has the future all mapped out

- Honeywell leads the world in building control technology, improving the working environment, conserving energy and raising fire and security standards.

In fact, Honeywell building controls can match the needs of any building precisely, from individual controls to a fully integrated management control and protection system.

The market for Honeywell building controls covers every type of location and every kind of customer. And, whatever your requirement, our distributors in Ireland are on hand to provide advice and support. That's how we build strong working partnerships with all customers.

Honeywell's reputation for quality and reliability is second to none. And this, coupled with our market leading innovations, ensures that buildings run smoothly and can easily be upgraded or modified with products that will serve you effectively today and well into the next millennium.

Automation and Control Systems.

Honeywell

Honeywell House, Arlington Business Park  
Bracknell, Berks RG12 1EB

Telephone: 0044 1344 656000

Fax: 0044 1344 656240



# Reliable, Versatile & Innovative HVAC Instruments from Sirius

## INSTRUMENTS & CONTROLS

Sirus Engineering Systems has an extensive portfolio of dedicated HVAC and process instruments from some of the leading manufacturers in the sector. The various brands represented are chosen for their quality and versatility, and the fact that they constantly bring innovative products to the marketplace. Siemens and Kimo Constructeur are a typical case in point.

Siemens Building technologies offer a comprehensive range of flow and heat meters designed for use with heating and cooling in both commercial and residential applications. The range incorporates both single-jet and ultrasonic meters which can work with flow rates from 0.6 to 60m<sup>3</sup>/hr. Versions with screwed and flanged connections are also available. Power supply options include battery back-up so that data is not lost during mains failure in the building.

Conceived in the era of energy conservation, the range provides cost effective control and accurate measurement of energy usage. There is also the facility to ensure fair cost allocation among users in multi-tenanted situations.

Remote reading of the data collected is an increasing demand and the range incorporates methods to achieve this requirement, including networking of meters using standard M-bus communication and radio transmission of data.



The Kimo pressure transmitter available from Sirius Engineering Systems

Meters with a pulse output such as gas, electric and water meters can also be incorporated into the system.

There are two principal ranges within the Siemens portfolio — Siemeca and Sonoheat.

The Siemeca range provides hot and cold water meters for both commercial and residential applications. These cost-effective units are battery-powered, single-jet, meter types which are supplied with screwed connections. The information is displayed in kW/h.

The Sonoheat range provides flow and heat meters for commercial and residential applications. The meters are ultrasonic type and can be supplied with flanged or screwed connections. A self-diagnostic facility allows problems with the unit to be rectified automatically.

Turning to Kimo Constructeur, this company was originally

established in France in 1979 and has since, through various developmental stages, emerged as one of the leading manufacturers of HVAC and process instruments in Europe.

It invests considerable sums each year in research and development to design and manufacture air measurement, monitoring and regulation instruments for all manner of hvac and process industry requirements.

Principal product categories catered for include pressure; temperature humidity; air velocity; air flow; and tachometry. The actual product range includes:—

- Liquid column manometers;
- Portable measuring instruments for climatic engineering;
- Pressure sensors / transmitters;
- Air humidity and temperature sensors / transmitters;
- Pitot tubes;
- Blades and units for

measuring air flow in flues;

- Mechanical and electronic temperature and humidity recorders;
- Combustion analysers;
- PT 100 portable thermometers and thermocouples;
- Differential pressostats;
- Calibration benches;
- Special projects;
- Scaling and calibration of instruments.

Latest products coming on stream include simple-to-use, ergonomic, reliable and accurate portable instruments; a new range of transmitter sensors; and a choice of liquid column manometers for use in the treatment of air, heating, ac, chimney flues and ventilation network systems.

Full details on both Siemens and Kimo are available from Sirius Engineering Systems.

Contact: Martin Keogh, Sirius Engineering Systems.

Tel: 01 - 460 2600;

email: martin.keogh@sirus.ie



Siemens Building Technologies offers a comprehensive range of innovative, reliable and versatile heatmeters.





## Cylon making change easy



Cylon's flexible control solution minimises the costs of design changes even at a late stage in commissioning. Client's needs change, plant equipment is updated, but with Cylon the same control solution can fit your project requirements. Cylon UnitronUC32 range of controls are unique in their level of adaptability, with UniPUTS™ as standard and a common software framework throughout the range.

21  
YEARS IN  
BUSINESS

For the versatile Cylon specification please  
contact us today on (01) 245 0500  
or [info@cylon.com](mailto:info@cylon.com)  
[www.cylon.com](http://www.cylon.com)

# CYLON



# Honeywell — "Centres of Excellence"

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Honeywell is one of the leading suppliers of domestic, industrial and commercial heating and combustion controls in Ireland with products that include time, temperature, gas and water controls. The product range is extensive and designed to provide the best in comfort, energy and health solutions. All are manufactured to the highest quality standards at its various production "Centres of Excellence" throughout the UK and Europe where ISO 9000 quality procedures are rigidly followed.

The portfolio is always under review with new, innovative products constantly being introduced to meet changing market requirements. The scope of applications catered for is virtually limitless, the various ranges being grouped under specific headings. These include:—

## *Hometronic*

The Hometronic system is a full home automation system that allows underfloor room heating, lights, roller shutters, venetian blinds, awnings, etc to be controlled easily and comfortably without the need for wires;

## *Motorised Valves*

Honeywell's range of two and three port valves are among the premier valves used in the domestic central heating installations throughout Ireland;



Honeywell has introduced Smile, a versatile new heating controller for both underfloor and radiator heating.

## *Programmable Thermostats*

Honeywell's range of analogue and digital programmable thermostats provides automatic time and temperature control of radiator, cooling and warm air heating systems. Wireless (RF) versions are available, as is the automatic time set option. Optimum start is also available on the CMx range;

## *Radiator Thermostats*

Thermostatic radiator valves (TRVs) are used to regulate individual radiator outputs in wet central heating systems. Honeywell has a very extensive range of models and styles to choose from; Room, Frost and Surface Mounted Thermostats — Honeywell supplies a very extensive range of thermostats, all designed to very high standards and to provide years of reliable use;



CM Zone uses wireless RF signals from central unit to every radiator for time/temperature control of several heating zones. It delivers "right temperature, right time, right place", for maximum comfort and minimum energy wastage.

## *Smartfit*

The Smartfit System is a major innovation from Honeywell. It provides the benefits of one point control plus simple and fast installation using plug-in low voltage connections;

## *Time Controls*

This range comprises a series of matching one and two channel time controllers with independent heating and hot water control and three switching times per channel per day for seven days.

Equally important is the technical support provided by Honeywell. It runs regular installer training courses which combine theory and "hands on" experience covering all aspects of installation and energy conservation. Included are up dates on control selection, fault finding and wiring skills.

In addition, each Honeywell product is supplied complete with printed installation and operation guides which can also be accessed online if the printed versions are mislaid.

As the foregoing illustrates, Honeywell is not merely about supplying products but rather about delivering tailored solutions — including full technical support — for all manner of HVAC applications, be they domestic, industrial or commercial.

Contact: Honeywell Control Systems.  
Tel: 0044 1344 656 000.



# KIMO®

## Portable Instruments for Air Measurement

- Pressure
- Temperature
- Humidity
- Velocity
- Flow
- Tachometry



# SIEMENS

## Heatmeters — Reliable, Versatile and Innovative



### Siemeca™ Range

- Hot & cold water applications
- Quick & easy installation
- Pulse output, M-bus connection or radio output
- Battery powered
- Screwed connections G1/2 to G3/4
- Flow rates 0.6 to 2.5 m³/hr
- Pressure rating PN10



Right: The Siemeca Hot/cold  
water meters WFN.../ WFM...

# SIRUS

Published by ARROW@TU Dublin, 2005

### SIRUS ENGINEERING SYSTEMS

13 The Westway Centre, Ballymount Avenue, Dublin 12

Tel: 01 - 460 2600

Fax: 01 - 450 7968

email: [info@sirus.ie](mailto:info@sirus.ie)

web: [www.sirus.ie](http://www.sirus.ie)



# Cylon — Smart Energy Control for Buildings

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Cylon Controls is now celebrating its 21st year in business. Still headquartered in Dublin, it has grown to be the largest independent manufacturer of building controls in Europe. This growth is based on the proven reliability of Cylon products. With an installed base of over €60 million in controls, Cylon customers describe the product as "bullet proof", while the long-term reliability instills confidence in users.

"As an Irish company Cylon provides unparalleled technical assistance and support services", says Alan Kearney, Sales Manager. "With development, test, manufacturing, operations and customer services all located in Ireland, we have a distinct advantage over foreign-based competitors. With the local resources and support base, we go the extra mile in helping customers solve the toughest design challenges".

UnitronUC32 is the latest generation of building management system from Cylon and over the past 12 months the Irish market has really embraced the power of these ethernet controllers. UnitronUC32 is both backward and forward compatible. Existing Unitron sites can be upgraded with UnitronUC32 web communication controllers and future expansion is limitless.

The benefits of the UnitronUC32 system include:—

*Simplification of the building control solution*  
Design is greatly simplified by the powerful UnitronUC32 system architecture. The Unitron Engineering Centre also provides a common software framework across the full range of controllers which in turn means that less engineering is required upfront;

*Future proofing of investments*  
UnitronUC32 is future-proof as controllers are flash upgradeable. Ethernet and open web support as standard further protects the investment in a Cylon BMS;

*Reduced cost and risk of design changes*  
Cylon's flexible control solution with UniPUTS™ as standard minimises the



The UnitronUC32 product family from Cylon now also includes a full range of sensors

cost of design changes even at late stages in commissioning. Capacity that would have been unusable is now available for expansion;

*Easy remote monitoring and control*  
Facilities managers can manage alarm delivery by email or SMS and use their mobiles to control plant on site. Even small sites can be managed remotely from a standard web browser;

*Unrivalled flexibility*  
UnitronUC32 offers the most flexible solution on the market today. The free

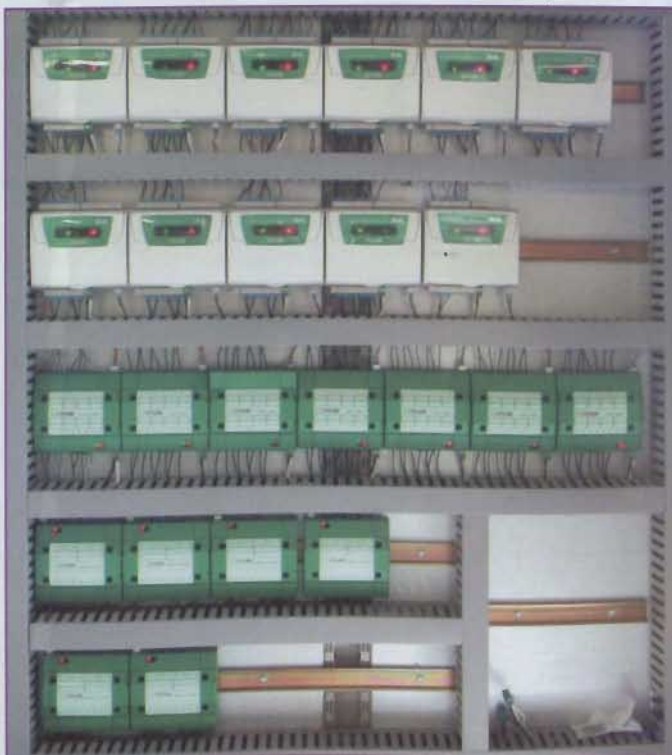
programming capability of all controllers, including unitary controllers, provides maximum versatility for even the most unusual requirements.

Given the 40% rise in energy costs in Ireland over the last three years, end users are increasingly seeking to leverage their BMS for energy control projects. The UnitronUC32 BMS supplies robust energy monitoring and control capabilities that include web based monitoring. For many customers, savings of 10-20% can be achieved without additional capital investment. Tackling low hanging fruit like time schedules and ensuring heating and cooling are not competing can deliver significant early cost reductions.

Reviewing the effectiveness of current sensor locations can similarly identify potential energy savings. Adding sensors to a space can provide more accurate control and invaluable information on ongoing plant performance.

Cylon provides a comprehensive suite of products that really help users deliver on their energy efficiency goals.

Contact: Alan Kearney, Cylon Controls Ltd.  
Tel 01 - 245 0500;  
email: alan.kearney@cylon.com;  
www.cylon.com



The smaller form factor of UnitronUC32 products reduces the size of MCC panel required



# SIEMENS

## *Siemens Building Technologies makes managing hot water and central heating easier*

### **Innovative Programmer design**

There are two new controllers from Siemens — RWB27 for use with central heating systems; RWB29 for dual hot water and central heating. Compact design coupled with innovative features ensures that operation is simple. Simple push-buttons on the front of the controller enable it to be programmed in-situ.

### **Benefits**

- Programming flexibility
- Up to three on/off settings
- Three hour boost facility
- Holiday programme that overrides other settings
- Large liquid crystal, backlit, display



### **Mobile Phone Technology**

Using menu-driven technology similar to that employed in mobile phones Siemens has made programming of domestic hot water and central heating systems far easier.

### **Siemens TRVs**

Today's range of Siemens TRVs is one of the widest selections of HVAC control valves on the market, ranging from radiator valves up to large DN150 / PN40 valves for district heating plants.

The rooms and zones portfolio comprises a full modular range of 2.5mm and 5.5mm stroke valves. In combination with thermal or electromotoric actuators and on/off, 3-position and DC0...10V control signals, any preferred choice is available.

The MiniCombiValve, a world novelty for automatic balancing, is the ideal answer for trouble-free radiator installations, both new and retrofit.



**FläktWoods**

Fläkt Woods (Ireland) Ltd  
Unit 1, Broomhill Business  
Park, Tallaght, Dublin 24  
Tel +353 (0) 1 463 4600  
Fax +353 (0) 1 463 4650

www.flaktwoods.com  
Published by Airnews Ireland, Dublin, 2005





# Fläkt Woods — The Ultimate Solutions Provider

## I N S T R U M E N T S & C O N T R O L S



Martin Dunne, Senior Sales Engineer, Controls Division, Fläkt Woods (Ireland)

Fläkt Woods (Ireland) Ltd is one of the leading players in the building services industry in Ireland, having been incorporated in February 2002 following the merger between the ABB Air Handling Division and Woods Air Movement Ltd. Although only recently incorporated, Fläkt and Woods combine almost 200 years experience in the air handling and air movement industry, and already had a very strong standing in Ireland. Since the merger that position has been further strengthened with market penetration growing at a considerable rate year on year.

In addition to ventilation equipment and systems more commonly associated with Fläkt Woods, the company also specialises in industrial, residential and BMS control systems. It has a continuous presence in the Irish marketplace stretching back to 1954, and offers everything from timeclocks through to valves, thermostats, mini valves, industrial valves and weather

compensation sets.

"Apart from the quality and innovative nature of those products, the manner in which we deliver them to the marketplace is equally important", says Martin Dunne, Senior Sales Engineer.

"To that end we have a dedicated team of highly-qualified, experienced personnel who design the complete controls installation, from conception through to fruition, for each specific project.

"All our engineers undergo continuous training and seminar updates on a full range of accredited courses (Siemens, Cylon). In addition, they attend practical application courses which bring a broad understanding of all aspects of works encountered in the controls industry.

"Working in partnership with the consultant and client, we help produce an all-embracing design tailored specifically for the particular application in question. We also oversee the installation and final commissioning.

"Essentially, what we offer the project specifier and client is comfort and security in the quality of the products used, the detail of the design, the quality of the installation work, and the ultimate performance of the devised solution."

Fläkt Woods leads the

field across all controls and BMS application areas, providing market-leading expertise in virtually every category. These include:—

**Motor Control Centres**  
Fläkt Woods engineers design and manufacture customised MCCs catering for all manner of building services applications;

**OEM Interface**  
BMS systems provided by Fläkt Woods are capable of interfacing with a variety of different protocols, including ModBus, BacNet and Lon. This allows for information retrieval from equipment such as chillers, boilers, switchgear, etc;

**Remote Access Control**  
Fläkt Woods provides web-enabled solutions in association with trading partner Cylon Controls. These allow for client front end control and remote access to BMS installations via the world wide web.

Also included is:—  
Bespoke graphics packages mirroring site equipment;  
Software engineering;  
Client demonstration and training for installed systems;

**Turnkey Packages**  
Fläkt Woods provides the full controls/BMS turnkey package, including:—  
Wiring and controls installation;  
Design and construction



Dave McMenamin, Product Manager, Residential & Industrial Controls, Fläkt Woods (Ireland)

of motor control centres; Full on-site testing and commissioning of plant and BMS outstations;

**Energy Management**  
Full monitoring and control of on-site utilities covering electricity, oil and gas;

**Lighting Control**  
All aspects of lighting control are catered for, including occupancy detection;

**ACSI**  
Fläkt Woods has enjoyed a long association with Cylon controls dating back to 1987. It has a strong affiliation with their early releases, right through to the latest UC32 offering. Working closely together has positioned both at the forefront of the controls industry in Ireland.

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dave.mcmenamin@flaktwoods.com





## AquaSnap Shortlisted for RAC Innovation Award

**T**he Carrier AquaSnap Puron from Core Air Conditioning is the first air-cooled chiller for large commercial applications designed specifically to operate with refrigerant R410A. Confirming Carrier's role as a leading industry innovator, this new range combines a host of innovative features and has been shortlisted for the forthcoming RAC Cooling Industry Awards under the Environmental Pioneer AC category.

Based on the concept of the successful AquaSnap range, the new more powerful AquaSnap Puron covers the capacity range from 190-760kW, available in cooling only or heat pump versions. It combines the efficiency benefits and environmental responsibility of R410A with the popular features of the AquaSnap concept.

Puron (Carrier's brand name for R410A), is a safe, stable blend that has been adopted widely over the past eight years as the refrigerant of choice for smaller systems. R410A is not harmful to the ozone layer and has



Carrier's AquaSnap Puron from Core Air Conditioning shortlisted for an RAC innovation award

excellent thermodynamic properties, transferring heat more effectively than any other commonly-used refrigerant. As an example, the use of R410A in the heat pump version of the AquaSnap Puron translates into a COP of 2.8 at full load (nominal conditions).

The Carrier AquaSnap Puron uses rotary scroll compressors and this is believed to be the first time that they have been used in conjunction with R410A for equipment of this size. The enhanced efficiency that is the result of combining R410A refrigerant with scroll compression enables these units to be optimised to deliver the required capacities at reduced levels of power consumption.

To maximise efficiency at the part

load conditions that prevail for most of the year, the latest generation patented Carrier Pro-Dialog control automatically detects and anticipates load variations, starting up only those compressors required. Linked to the electronic expansion valve (EXV) Pro-Dialog improves use of the evaporator heat exchange surface to further optimise energy efficiency at part load.

The resulting very high seasonal energy efficiency ratio (SEER) means that at part load conditions (where most chillers operate for 95% of the time) the AquaSmart Puron delivers around 4.5kW of cooling for 1kW of electricity consumed. Heat recovery options (total or partial) can further increase overall system efficiency by

using reclaimed heat to generate domestic hot water.

The AquaSnap Puron incorporates the fourth generation of Carrier's patented Flying Bird shrouded axial fan. This has an exceptionally-aerodynamic impeller and a high efficiency motor requiring 35% less energy than a conventional fan.

The unit's compact footprint makes it ideal for installation in new buildings or during the refurbishment of existing buildings, freeing valuable floor area. There is no need for additional plant room space for the installation of pumps, valves, expansion vessels and other accessories as all components have been integrated within the hydronic module, the heart of the AquaSnap concept. For installers there is just one "box" and one set of connections. Today, a 500kW AquaSnap Puron 410A can be operational in three days, including installation, hydronic and electrical connections and commissioning. Contact: Austin McDermott, Core Air Conditioning. Tel: 01 - 409 8912; email: info@coreac.com



# Should We Be Concerned About Harmonics?

**Mr Kevin O'Connell, Head of Department of Electrical Services Engineering, DIT Kevin Street. Email: kevin.oconnell@dit.ie**

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My previous article (BSNews August 2005) gave a brief introduction to the subject of harmonics and their presence in modern electrical installations. Harmonics can be imported from an already distorted supply and/or generated internally by non-linear loads such as fluorescent lighting, personal computers and most electronic equipment. This article will look at the harmonic content of

circuit currents supplying personal computer loads and examine the implications for the electrical services designer from a cable-sizing point of view.

Figure A depicts the voltage and current waves for a personal computer. The current wave clearly bears very little resemblance to a sine wave. This means of course that there is a large harmonic content present.

The spectral analysis depicted in Figure B shows some of the actual harmonic content of this current. The higher frequency harmonics have been omitted for clarity. The total harmonic distortion of this current was

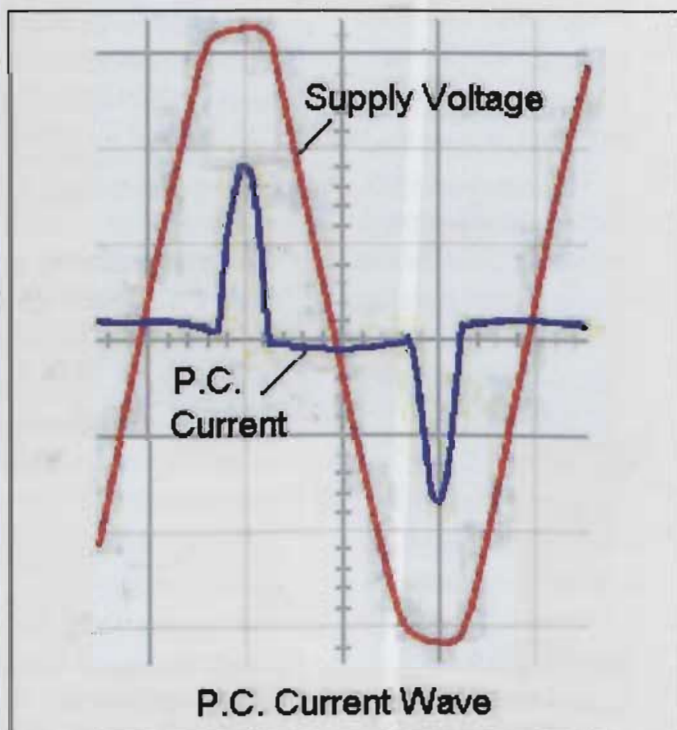
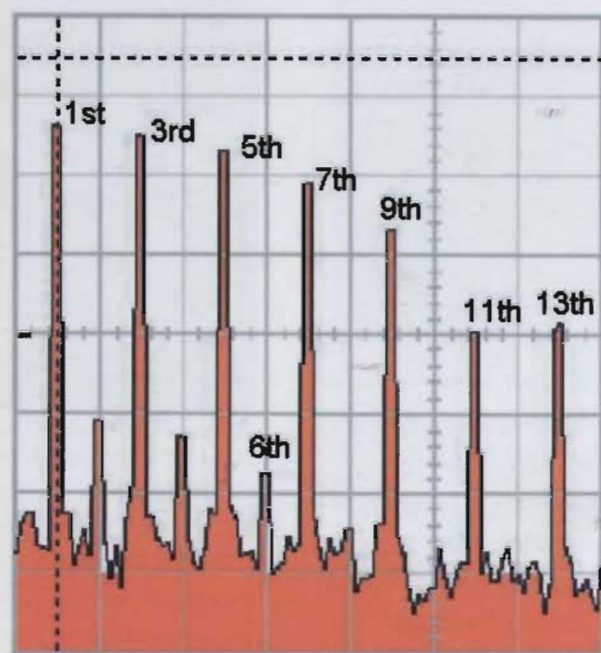


Figure A: Voltage and current waves for a personal computer



Spectral Analysis showing the harmonic

Figure B: Spectral analysis shows some of the actual harmonic content of this current

measured at 75% in our laboratories in Kevin Street.

All very well you might say but what difference does this make to the loading on a cable supplying the PCs? For a single-phase circuit, it doesn't make any difference but for a three-phase cable, the so-called triple-n harmonics (3rd 6th 9th 12th etc) add up in the neutral conductor instead of cancelling out as is normally expected in a three-phase balanced load.

Take an example where there are 60 PCs supplied by a three-phase distribution board which in turn is supplied by a four-core three-

phase cable. Twenty PCs are supplied per phase at three amps per PC, giving a total load per phase of 60 amps.

The loading on the three-phase cable supplying the distribution board may be found as follows: If the sum of the 3rd, 6th, 9th, 12th, etc. harmonics constitute 40% of the total current, then the current in to neutral conductor will be  $3 \times 40\% = 120\%$  of the phase current. i.e.  $60 \times 1.2 = 72$  amps.

The need for derating the cable is clear because cable manufacturers rate four-core cables on the basis that only three cores are loaded. In the above



## Should We Be Concerned About Harmonics?



Photo courtesy of the Copper Development Association showing overloaded cables

ation all four cores are loaded and in fact the neutral conductor will be carrying  $60 \times 1.2 = 72$  amps when each phase conductor is carrying 60 amps. In the above situation the cable should be sized to carry 72 amps instead of 60 amps and the cable further de-rated to take account of all four cores carrying current.

Is the above pure theory or does it have basis in reality? Perhaps a look at the photograph above (courtesy of the Copper Development Association — CDA) may yield the answer. A special prize goes to the reader who can pick out the overloaded neutral conductor!

Quite clearly the presence of harmonics is a factor that should be reflected in the electrical services design. Very often the problem is ignored and only

addressed after the building has been put into service. The harmonic content of the load is measured and suitable harmonic filters are fitted to reduce the harmonic currents taken from the electricity supply authority, much the same as in power factor correction. The impact of harmonics, however, within the building remains unaffected.

Research is currently under way in DIT Kevin Street to create a model whereby the levels of harmonic distortion can be predicted at design stage and appropriate allowances can then be made in advance. Electromagnetic interference that is generated within buildings is yet another related issue that we will hear a lot more about in the years to come.

## Building Services

### Product Specification Guide

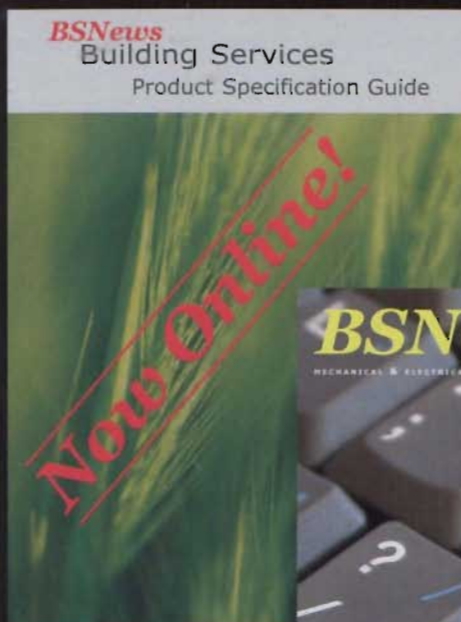
See for yourself ... log on to **www.bsnewsbuyerguide.com** and register to **PREVIEW** the site.

There are a limited number of **"Button Adverts"** available at a special introductory rate of **€750** for the inaugural **12-month period**.

The format will comprise your **company's logo** and a direct **email link**.

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***This is an excellent opportunity for you to promote your products to key decision-makers in building services.***



**Contact: Joe Warren**

**tel: 01 - 2885001    mobile: 086 253 7115**

**email: joe@pressline.ie**



## RECI Annual General Meeting

**Contact: Mr David McGloughlin, General Manager, RECI.**

**Email: dmcdgloughlin@reci.ie. Tel: 01 - 492 9966.**

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**T**he 13th Annual General Meeting of RECI was held recently at the Register's headquarters in KCR Industrial Estate in Dublin. The Chairman, in his address to the meeting, stated that RECI continues to develop to meet the challenges of the changing environment in which it operates.

The Commission for Energy Regulation (CER) has assumed the role of supervisory regulator of the electrical contracting industry and RECI is participating on a voluntary basis in the new arrangement. It is expected that the CER's role will be given statutory backing in forthcoming legislation in the near future. When this happens RECI believes it will be possible to ensure that all electrical installation work is carried out to satisfactory standards which will benefit both registered electrical contractors and consumers.

The Chairman referred to the new Electronic Completion Certificate System which is now well established and is being used by many contractors who find it of great benefit. There are numerous advantages to the system such as:— Certificates cannot get lost or delayed in the post; books of certificates cannot get lost or stolen; easy reference to certificates at any time; and the electronic certificate gives a

professional image to the customer.

The Chairman reported that a certification scheme for Emergency Lighting Contractors similar to the ETCI/RECI arrangement was being considered by NSAI. Also, NSAI is establishing a certification scheme for commissioning of Fire Alarm Systems.

The Chairman noted also that the Health and Safety Authority is strictly enforcing safety requirements on construction sites and electrical contractors must comply with all aspects of safety legislation.

The Chairman said that the Joint Secretaries, Des Flood of the AECI and Terry McEvoy of the ECA, resigned at the end of the year. Both Des and Terry were involved in the formation of RECI and their administrative experience was of great benefit in establishing the organisation. He expressed his thanks to them both for their tireless work over the years.

The Chairman also informed the meeting that Michael Moran was retiring from the board of directors. He has been involved in the electrical industry at every level and his vast experience and knowledge has been of great benefit to RECI. The Chairman thanked him for his commitment to RECI over many years and wished him well in the future on behalf of RECI members.

Concern was expressed that completion certificates were still being illegally sold by registered contractors to other electricians who are not members of a licensed regulatory body. It was pointed out that RECI has a complaints procedure and contractors are urged to lodge complaints when they become aware of abuse of the certification procedure or other safety matters. It was also stated that some industrial contractors were giving completion certificates to electrician members of their staff to enable them to certify their own private installation work. RECI was urged to be more vigilant and to check on

these incidents more thoroughly.

Some concern was expressed regarding the slow progress of the full implementation of the CER criteria and the necessary legislation to give statutory backing to the CER and the regulatory scheme. It was explained that review meetings will take place to deal with problems which have arisen and that it was expected that the legislation would be passed in the autumn.

The Chairman confirmed that the board would give careful consideration to all the matters raised and he thanked contractors for their attendance at the meeting.

### Ryan Nominated RECI Director

Mattie Ryan has been nominated by AECI as a director of RECI. He has been actively involved in the AECI for 25 years and was President from 1998 to 2001. He has served in various other capacities and is currently Honourary Treasurer. Mattie has also been actively involved in other electrical industry committees in the ETCI and the EIFI.

He has been a well known electrical contractor in Limerick for 30 years, carrying out a wide range of



commercial and industrial contracts and other specialist work. He replaces Michael Moran who has retired from the RECI Board after many years service.





# Halton Total Indoor Climate Concept

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The thermal environment and indoor climate quality of offices, hotels and commercial buildings has a significant bearing on their economic performance. Today, more than ever, combining these feelings of comfort and well-being with the economic building life-cycle is essential and, to that

end, Entropic uses the Halton range to devise tailored solutions for each particular project.

Last month we featured the Halton Capture Jet ultra-violet technology (*BSNews August 2005*) and this month we focus on Halton's second-generation service beams. Traditional cooled beam installations have climatic beams as ventilation, cooling and heating solutions, next to other ceiling-based services. However, Halton's service-beam concept comprises an all-in-one solution for all ceiling-mounted services.

Primary constituent parts are:—

- Ventilation;
- Cooling & Heating;
- Exhaust;
- Sprinkler System;
- Lighting;
- Smoke Detector;



Halton's service-beam concept comprises an all-in-one solution for all ceiling-mounted services. Pictured is a typical installation.

- Cabling;
- PIR Sensor;
- Loud Speaker.

The power pole connections for electricity, telephone and data connections also provide convenient connections in landscape offices.

Heat and containment loads vary a great deal, depending on the project's nature and related occupancy. Obviously, high occupancy requires a high ventilation rate and cooling capacity, whereas unoccupied spaces can be maintained at low ventilation rates. Halton demand-controlled air conditioning aims for energy-efficiency at all times, taking these load variations into account.

Individual room and zone control is a standard feature. Flexibility for future sub

division of office spaces is particularly attractive to investors and government departments.

The service beam concept is suitable for both flush and exposed mounted solutions, while also supporting future layout changes and reducing air velocities in the occupied zone. More than the sum of its integral parts, the Halton service beam is an integration of aesthetics and economics, from installation through a whole lifetime of use.

Benefits include:—

- Excellent temperature conditions along with silent and draught-free operation;
- Flexibility for different layouts, from open-plan to partitioned offices;
- Pre-assembly at factory which

increases installation speed, improves quality and reduces costs;

- One source of responsibility for all activity;
- Plug-and-play with rapid connections reduces commissioning time and costs on site;
- Competitive investment cost when compared with traditional systems and suspended ceiling installations;
- Economical life-cycle because of low energy consumption and low maintenance demands;
- Increased room height as no suspended ceiling required.

Contact: Michael Geraghty, Entropic.  
Tel: 01 - 610 6170;  
email: info@entropic.ie





## Energy Labelling of Buildings in Ireland

*The following is the full text of the REGII Response, incorporating views of National Installer Federation Members, to The Consultation Document published by the EPBD Working Group.*



Kevin Farrelly, Chairman, REGII

First and foremost congratulations on the publication of the Draft Energy Labelling of Buildings in Ireland discussion document. This is long overdue and something which, when enacted and implemented, will undoubtedly make a significant contribution to energy savings and a reduction in harmful emissions.

As for the overall content — and especially the spirit and thrust of the Document — REGII is fully supportive of the general proposals. All the key issues are identified and the phased approach you suggest is perfect given that a massive mindset change — in the "psyche" of both consumers and installers — is called for.

Herein also lies the major pitfall. While the general public can be convinced of the value of Energy Rating with properly-planned promotions and advertising, the difficulty is that, as things currently stand, the domestic engineering sector cannot deliver.

You estimate a requirement for something like 2000 assessors/auditors to handle the certification process. However, the unfortunate reality is that there are nowhere near that number of competent, fully-qualified, heating

engineers in the country.

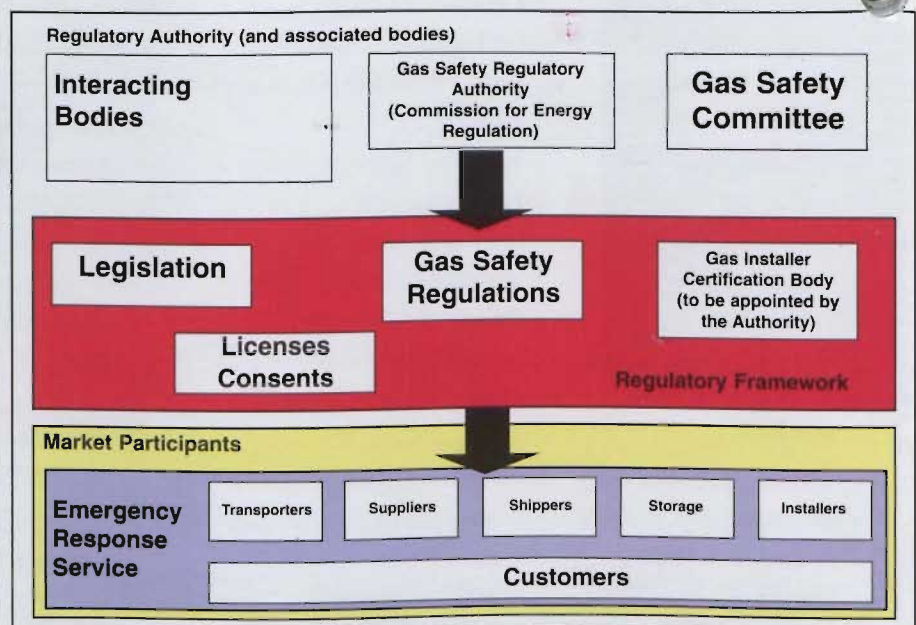
Nonetheless, therein also lies the silver lining. Coincidentally, the domestic heating industry has been campaigning for a more defined education/training structure for domestic heating engineers, culminating just weeks ago with the formation of a national Federation of domestic heating engineering representative bodies.

The SEI was a party to the early stages of this development and Kevin O'Rourke is perhaps best au fait

with the relevant issues and the matters which need to be addressed.

The momentum and desire for a properly-regulated industry has never been greater from within the domestic engineering sector. That, in the context of the requirements to implement and administer the EPBD, makes for perfect timing.

So, while we advise caution in that currently there is a massive shortfall in qualified personnel to do the necessary work,

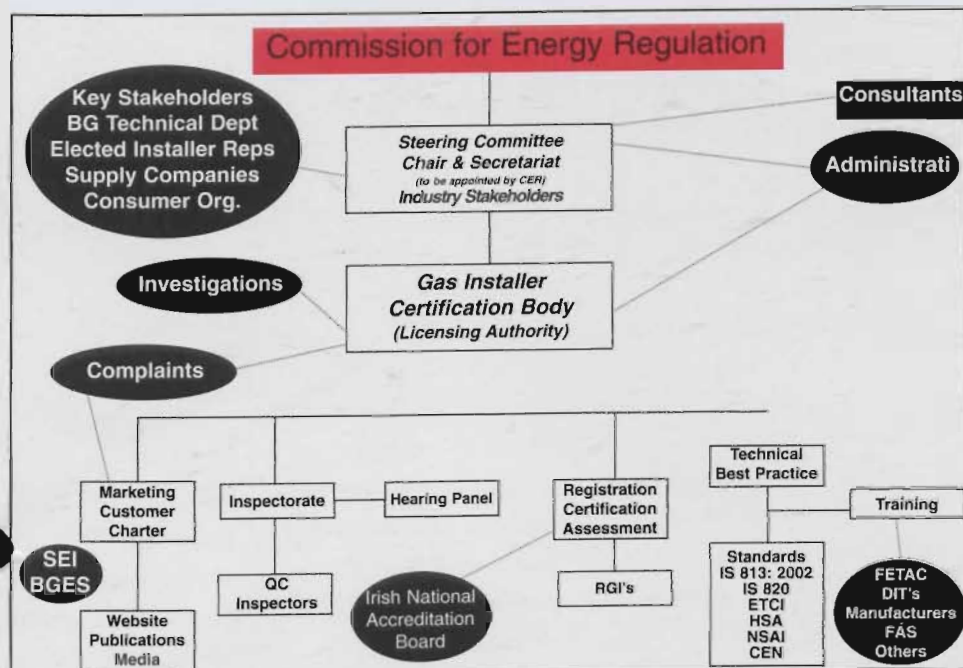


The Proposed Safety Framework





# Energy Labelling of Buildings in Ireland



Registered Installers Proposed Safety Framework

the timing is perfect in that the industry itself has already recognised this fact, has developed a strategy to remedy that situation, and is now looking for a partner to help it realise that objective.

Critical to the successful implementation of the EPBD is a sufficient pool of competent, qualified, accredited engineers to do the work. That body of people can be in place by the year end if all the parties involved capitalise on the excellent progress made to date and move forward together to tailor the education/training/accreditation structures to suit the EPBD needs.

Additional benefits will

also accrue on the energy and related front as a better-qualified pool of domestic heating engineers will make for better installations and more efficient performance outputs.

In the context of the foregoing we would welcome an opportunity to meet with you and your colleagues to tease out this response further and the move the matter forward so that, when the time comes for inspections and certification to begin, there are sufficient accredited and qualified domestic heating engineers to meet the challenge.

We have already considered the matter in great detail and

discussed it nationwide, at local level, with the regional bodies representing domestic installers. All agree that, critical to realising the desired objective of an orderly, professionally-run industry sector is the establishment of a Register of Domestic Heating Installers. It can also be taken as read that, without such a Register, a vast portion of the required 2000 operatives coming forward to inspect and issue Energy Labels in respect of buildings will be incompetent and lacking the necessary qualifications to carry out the task.

A Register would also restore/confirm consumer confidence in the quality and

workmanship of legitimate industry operatives and eliminate the scope for unqualified, incompetent and non-insured individuals to exploit the requirements and spirit of the Energy Performance of Buildings Directive.

It would also facilitate a professionally-run "complaints" procedure whereby consumers could, in the event of a problem, make formal representation to a controlling body who in turn could (a) investigate the matter (b) direct that the problem be rectified and (c) impose sanctions on the installer concerned should that be necessary.

## Existing Training

To establish a Register of Installers demands a qualification criteria and adherence to best practice procedures. The best way to guarantee that is by way of specially-devised training and educational programmes. Among the schemes already established are the following:—

— GI1 (basic gas safety);

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# Energy Labelling of Buildings in Ireland

## SETTING INSTALLATION STANDARDS

— GID (Domestic gas installations).

Among the established training providers are Fás (Cork); European Energy Skills (EES); Dublin Institutes of Technology (plumbing apprenticeships); and the Gas Training Development Group (GTDG).

The foregoing represents an established framework upon which to build and develop clearly-defined course aimed at serving the medium and long-term industry needs.

### Future Training

The additional training provision necessary to meet the requirements of the proposed legislation needs to cater for the following:—

- Regular Assessments;
- Certification of Competency;
- Irish National Accreditation Board involvement;
- Continuous Course updates;
- Updates on Standards/Regulations changes;
- Best practice procedures;
- New technology.

### Why Does the Industry Need Legislation?

The fact that legislation is required to oversee the industry and thereby ensure consumer safety is self-evident. With de-regulation BGE can no longer be held responsible, or accountable, for the quality and/or safety of installations. Despite the fact that it does an excellent job in its current role, there are still scenarios over which it has no control. These include:—

- Gas to gas works (no BGE involvement);
- Approximately 60% of certificates are not issued to customers or returned to BGE;
- Approximately 50% of existing operators in the industry are not qualified;
- Manufacturers and retailers need to buy in to a Safety Assurance Programme;
- Housing Scheme Developers need to do likewise as a large percentage of building site installers are not qualified.

### Aims and Objectives

For the New Gas Installer Certification Body to be successful requires that all

industry stakeholders buy in to the concept. As a body the entire industry must portray to the consumer the need for, and benefit of, a high-quality, top-performing, safe installation.

That requires installers and product suppliers projecting a unified image, speaking with the one voice, and promoting the value of professionalism and value for money, as opposed to the cheap, low-value, route.

That same unity strength of unity can be harnessed to influence Government bodies, committees and related networks; to help devise and implement industry regulations and standards; to define and support training schemes; to monitor ongoing assessment procedures; and to support and encourage technical excellence.

### Key Issues

Among the key issues to be addressed in the interim are:—

- Transition arrangements;
- Cost to the industry who pays?
- Period of license to be issued;
- All installations to be covered (natural

gas, oil and LPG);

- Grandfather clause for long-established practitioners;
- Development of fitter competence and abilities;
- Evaluation of current education and training programmes.

### Benefits — A Safer Industry

The potential benefits for all stakeholders in the sector — be they educators, installers, product suppliers or consumers — are enormous. A fully-qualified, licensed workforce which undergoes continuous training updates and assessments will make for a massive industry resource. Additionally, product suppliers can rest easy knowing that problems caused by incorrectly-installed units will be eliminated.

Consumers too will benefit immediately from the professionalism of installers and can also feel secure in having the finished installation formerly certified. The fact that a regulatory authority carries out random inspections reassures the consumer still further.





For automated building services.  
Intelligent bus controller.  
Suitable for heating / air conditioning  
from  $-10$  up to  $+110$  °C.  
80 % energy savings.\*  
Highly efficient.



### *Wilo-Stratos high-efficiency pump.*

The Wilo-Stratos is the first high-efficiency pump in the world. Thanks to its innovative ECM technology it permits energy\* savings of up to 80 % compared to standard pumps. This applies both for heating systems and for air-conditioning and cooling systems. In conjunction with its intelligent bus controller this makes it the ideal solution for building automation. Ingenious?  
We call it Pumpen Intelligenz.



*Pumpen Intelligenz.*

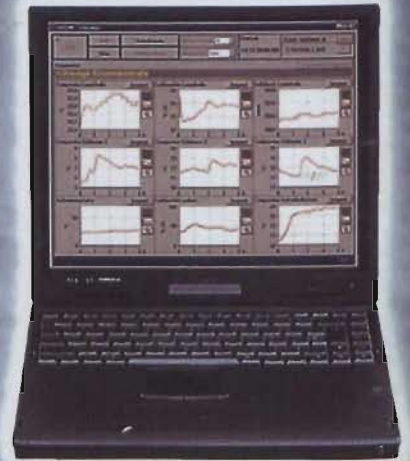
\* Electricity for the heating / air-conditioning pump.



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